

III. *Notes on the species of the lepidopterous genus Euchromia, with descriptions of new species in the collection of the British Museum.* By ARTHUR G. BUTLER, F.L.S., F.Z.S., &c.

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PLATE IV.

THE genus *Euchromia* contains some of the most brilliantly coloured of all the tropical Burnet-moths; the greater part of the species are well represented in the National Collection, and form as beautiful a group, and as worthy of public attention, as the humming-birds in the class of Aves.

My attention has been at this time specially called to the genus by the receipt of a paper by Herr Röber of Dresden, in which four supposed new forms are described, only one of which I regret to say will be able to stand.

In my examination of the species I have been assisted by my colleague, Mr. W. F. Kirby, who has not only sent me for my use his MS. Catalogue of the genus, but has re-examined with me all species in the collection the verification of which was in any way open to doubt.

About twenty-five species have been described; I say "about," because two forms, *E. aruica* and *E. ganymede*, are only doubtfully distinct from *E. irius* and *E. creusa* respectively. The following is a list of the species in the Museum collection.

1. *Euchromia gemmata*, Butler. (Pl. IV., fig. 1).

One fine example only of this very distinct species, obtained by Mr. Woodford in the Solomon Islands.

2. *Euchromia rubricollis*, Walker.

Aneiteum and Mallicollo. We have a series of this species collected by Mr Gervase Matthew, and nine examples have been reserved to illustrate the species.

3. *Euchromia lurlina*, n. s.

About the size of *E. isis*; general pattern of wings as in *E. creusa*, the primaries being black with six hyaline white spots and two or three metallic blue spots, the secondaries with two spots divided by the nervures and a blue spot between them; the spots of the primaries differ from those of *E. creusa* as follows,—the pair separated by the median vein form an oblique oval; and the pair separated by the third median branch, as well as the isolated spot above them, are elongated to twice the length and therefore more nearly approach the outer margin; body black, the frons and margin of eyes snow-white, the shoulders and base of abdomen pale ochreous, the shoulders also opaline; the centre of tegulæ and metathorax metallic greenish blue; the second and third abdominal segments bordered behind with blue and with bright ochreous at the sides, the fourth segment broadly bordered with vermilion; remaining segments with extremely narrow blue edge; coxæ pearly white; body below dark brown, the fourth abdominal segment edged with ochreous. Expanse of wings, 38 mm.

One example of this very distinct species, from Thursday Island, was purchased in 1880.

4. *Euchromia isis*, Boisduval.

Of this very pretty species we only have one specimen, from Duke of York Island; it was obtained by one of the collectors for the Godeffroy Museum, and was purchased in 1882.

5. *Euchromia aruica*, Walker.

As already stated this may not be distinct from the *E. irius* of Boisduval, from which it chiefly differs in the size and width of the hyaline spots on the wings.

Two examples, Aru (*Wallace*).

6. *Euchromia æmulina*, Butler.

Allied to the preceding, though unquestionably distinct; we only possess one example, from New Guinea.

7. *Euchromia cælipennis*, Walker.

Two examples from Amboina; it also occurs in Ceram, and has recently been described and figured by Herr Röber, under the name of *Glaucopis pagensteckeri*.

8. *Euchromia ænone*, Butler. (Pl. IV., fig. 2).

One of the most beautiful species in the genus; we have a good series collected by Messrs. Woodford and Mathew in Alu, Sta Anna, Guadalcanar and Malayta (Solomon Islands).

9. *Euchromia mathewi*, n. s. (Pl. IV., fig. 3).

Allied to the preceding; decidedly smaller, the primaries with the subbasal elongate spot and the spot above the median vein smaller; the discal patch divided into three, instead of two large spots; the basal patch of secondaries much wider, in the female uniting with the trifid patch beyond; the body is more slender than in *E. ænone*, the shoulder spots pearly white instead of ochreous, the basal segment white at the sides, anterior coxæ snow-white instead of metallic green, the metathorax with two metallic green spots placed obliquely on each side, the crimson abdominal segments completely encircling the abdomen; the black intervening stripes being narrower than above, but not interrupted. Expanse of wings, 36—41 mm.

Solomon Islands: Three examples collected by Mr. Gervase Mathew.

10. *Euchromia creusa*, Linn.

This is the species figured by Cramer under the name of *Sphinx irus*, and by Herr Röber, under the name of *Glaucopis dubia*. I believe *S. thelebus* to be a representation of a worn example of the same species (such as we have from Ceram); our series consists of two examples from Ceram, three from Gilolo, one from the Celebes, one from the Pelew Islands, and one from the N.E. coast of Australia.

Var. ? *Euchromia ganymede*, Doubleday.

This handsome form is the commonest and most variable of the group; it differs from typical *E. creusa* principally in the much greater size of the hyaline spots on its wings; the outer spots of the primaries vary from three

to four and occasionally five, the anterior coxæ are either snow-white or metallic green (in specimens from the same island); the basal segment of the abdomen is either wholly green, or has the centre black, or has the sides opaline whitish and the centre brownish orange; grades between these variations also occur, proving that they have, in this species, no specific value; the black bands across the carmine also vary in width. We have a series of twenty-one examples in the collection from Australia, Ké Island, the New Hebrides, Lizard Island, Treasury Island, Pentecost, Guadalcanar, Alu and Malayta, of the Solomon group.

To this section of the genus belongs the *Glaucopis paula* of Röber, from East Celebes, a small species apparently allied to *E. calipennis*, but unknown to me. It is possible that *E. cincta*, of Montrouzier, may also come into this section, but the secondaries are described as having four yellow spots upon them, an entirely new feature among the hyaline winged species.

The following are species in which the primaries and nearly the whole or sometimes the whole of the secondaries are opaque.

11. *Euchromia lethe*, Fabricius.

This is the *Sphinx cumolphus* of Cramer, and was confounded by Walker with the following very distinct species under the name of *E. sperchius*; it is a common S. African species, and we have it from Natal, the Cape, and Madagascar.

12. *Euchromia fulvida*, n. s. (Pl. IV., fig. 5).

The West African representative of the preceding, and equally common; it differs in having the pale patches on the wings deep fulvous instead of sulphur-yellow; the metallic markings less blue, and the fifth segment of the abdomen pearly greenish-white instead of metallic green like the posterior segments; the anterior coxæ metallic green instead of pure white. Expanse of wings, 45—54 mm.

Thirteen examples, from the Congo, Angola, Sierra Leone, &c., are in the Museum series.

13. *Euchromia splendens*, n. s. (Pl. IV., fig. 4).

Differs from the preceding in the blacker colouring of the wings, the absence of the metallic spots between the deep fulvous patches on primaries, the much less distinctly separated fulvous patches on the secondaries, the total absence of all orange or red colouring from the thorax; this part of the body is jet black, the head, sides of collar, tegulæ (excepting the fringes) and a dorsal longitudinal stripe brilliant greenish blue; the basal abdominal segment is more orange and the fourth segment of a deeper red than in *E. fulvida*, and all the other segments are brilliant metallic greenish blue, the second and third segments edged with black. Expanse of wings, 49—53 mm.

Old Calabar to Camaroons.

14. *Euchromia africana*, Butler.

A common African species intermediate to some extent between *E. splendens* and *E. madagascariensis*, the secondaries being like those of the former, the primaries and body more nearly resembling the latter species: we have seven examples from Natal, Zululand and Delagoa Bay.

15. *Euchromia madagascariensis*, Boisduval.

Two specimens from Madagascar. The *E. amœna* of Moeschler, said to have come from Silhet, seems nearly allied to this species. Is it positively certain that the locality is correct? Surely it would be in Mr. Moore's vast Indian collection.

16. *Euchromia leonis*, Butler.

The body of this species resembles that of *E. splendens*, the wings, however, are wholly different. We have three specimens from Sierra Leone.

17. *Euchromia sperchius*, Cramer.

This is the *E. interstans* of Walker, represented by two examples from Ashanti.

18. *Euchromia horsfieldii*, Moore.

Five specimens, collected by Dr. Horsfield in Japan, are in the Museum series.

19. *Euchromia formosana*, n. s. (Pl. IV., fig. 7).

Pattern of primaries nearly as in *E. horsfieldii*; the orange patches wider; the interno-median patch partly divided before the middle by two black dots placed obliquely; secondaries nearly as in *E. polymena*, but the basal patch smaller; body as in *E. orientalis*, the fourth to sixth segments being carmine-red. Expanse of wings, 48 mm.

Formosa (*Hobson*).

20. *Euchromia fraterna*, Butler.

A species occurring in Moulmein, of which, at present, we have only one example, but which (judging by the constancy of its allies) is almost certain to be a fixed type; Herr Röber, however, says that he agrees with Herr Snellen in regarding this and *E. celebensis* as "insignificant aberrations, unworthy of names;" after which he proceeds at once to give one of them a new name himself.

21. *Euchromia orientalis*, Butler. (Pl. IV., fig. 6).

The common Burmese representative of *E. polymena*: the type unfortunately was labelled "N. India"—doubtless an error, as the species has since come in some numbers from Burmah; though, unhappily, many of them were so much injured as to be unfit to put into the collection.

22. *Euchromia polymena*, Linneus.

We have eight examples, from India and Ceylon.

23. *Euchromia celebensis*, Butler.

Four specimens from the Celebes: this is the *Glaucopis butleri* of Röber; he says that it differs from *E. celebensis*, in having the "lower radial of the primaries broadly bordered with black"—a slightly variable but constant character of *E. celebensis*.

24. *Euchromia laura*, Butler. (Pl. IV., fig. 8).

Although we only have one example of this species, and with the vague locality "E. India," it is so well-marked that its distinctness can be considered certain.

25. *Euchromia siamensis*, Butler.

One example only, from Siam.

In one of his 'Revisions of Australian Lepidoptera,' Proc. Linn. Soc. N. S. W., 2nd ser., vol. i. p. 787 (1886), Mr. Meyrick describes what he regards as *Euchromia polymena* from North Australia. Judging by his description of the markings of the primaries, I have no hesitation in pronouncing it to be perfectly distinct from the Indian species. As, however, I have not seen the broken specimen from which Mr. Meyrick penned his description, I leave it to him to give it a distinctive name: it probably should stand near the following.

26. *Euchromia semiluna*, Walker.

A very distinct species founded upon a single example, the habitat of which is unknown.

 EXPLANATION OF PLATE IV.

- FIG. 1. *Euchromia gemmata*.
 2. " *ænone*.
 3. " *mathewi*.
 4. " *splendens*.
 5. " *fulvida*.
 6. " *orientalis*.
 7. " *formosana*.
 8. " *laura*.